

December 31, 2002



# Financial Management

Naval Supply Systems Command  
Revaluation of Inventory to Latest  
Acquisition Cost  
(D-2003-039)

Office of the Inspector General  
of the  
Department of Defense

Constitution of  
the United States

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Article I, Section 9

## Report Documentation Page

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### **Acronyms**

CRR	Cost Recovery Rate
CSIS	Central Secondary Item Stratification
DFAS-CL	Defense Finance and Accounting Service Cleveland Center
LAC	Latest Acquisition Cost
NAVICP	Naval Inventory Control Point
NAVICP-M	Naval Inventory Control Point - Mechanicsburg, Pennsylvania
NAVICP-P	Naval Inventory Control Point - Philadelphia, Pennsylvania
NAVSUP	Naval Supply Systems Command
SSIR	Supply System Inventory Report
WCF	Working Capital Fund



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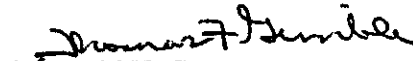
December 31, 2002

MEMORANDUM FOR NAVAL INSPECTOR GENERAL

SUBJECT: Report on Naval Supply Systems Command Revaluation of Inventory to  
Latest Acquisition Cost (Report No. D-2003-039)

We are providing this report for your information and use. We considered management comments on a draft of this report when preparing the final report. The Department of the Navy comments conformed to the requirements of DoD Directive 7650.3; therefore, additional comments are not required.

We appreciate the courtesies extended to the audit staff. Questions should be directed to Mr. James L. Kornides at (614) 751-1400, extension 211 or Ms. Amy J. Frontz at (614) 751-1400, extension 213. See Appendix C for the report distribution. The team members are listed inside the back cover.

  
David K. Steensma  
Deputy Assistant Inspector General  
for Auditing

## **Office of the Inspector General of the Department of Defense**

**Report No. D-2003-039**

**December 31, 2002**

(Project No. D2001FJ-0195.001)

### **Naval Supply Systems Command Revaluation of Inventory to Latest Acquisition Cost**

#### **Executive Summary**

**Who Should Read This Report and Why?** DoD civilian and military financial management personnel who use or are involved in the preparation of the financial reports required by the Chief Financial Officers Act. The report discusses the valuation of inventories on the Department of the Navy Working Capital Fund financial statements.

**Background.** Inventory represents a major portion of the total assets reported on the Navy Working Capital Fund Financial Statements. The Naval Supply Systems Command manages Navy Working Capital Fund inventory for the Navy Supply Management Activity Group. The Naval Supply Systems Command revalues its supply inventory throughout the year from the standard price it charges customers to the latest acquisition cost of the items in order to comply with financial reporting requirements. The Naval Supply Systems Command reported wholesale serviceable condition inventory of approximately \$9.9 billion (at latest acquisition cost) for the period ending March 31, 2001.

**Results.** The Naval Supply Systems Command materially misstated inventory when it revalued it from standard price to latest acquisition cost. The revaluation methodology was incorrect because the Naval Supply Systems Command removed a cost recovery rate from standard-priced inventory that differed materially from the cost recovery rate that was added by the Naval Inventory Control Point during initial item pricing. We estimate that wholesale serviceable condition inventory was misstated by approximately \$497 million for the period ending March 31, 2001. Additionally, the Naval Supply Systems Command provided data showing that wholesale inventories were misstated by approximately \$668 million for the period ending September 30, 2001. The Naval Supply Systems Command was using the same revaluation process for FY 2002 financial reporting. Until the revaluation methodology is corrected, the inventory values computed by the Naval Supply Systems Command cannot be relied upon for Navy Working Capital Fund end-of-period reporting. The Naval Supply Systems Command needs to value inventories at their latest acquisition cost for end-of-period reporting purposes.

**Management Comments.** The Director of Financial Operations, Office of the Assistant Secretary of the Navy (Financial Management and Comptroller) concurred with the finding and recommendations; therefore, no additional comments are required. See the Finding section of the report for a discussion of management comments and the Management Comments section of the report for the complete text of the comments.

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## Background

The audit was performed to meet the requirements of Public Law 101-576, the “Chief Financial Officers Act of 1990,” November 15, 1990, as amended by Public Law 103-356, the “Federal Financial Management Act of 1994,” October 13, 1994. This report is the first in a series on the valuation of Department of the Navy (Navy) Working Capital Fund (WCF) inventory. The Naval Supply Systems Command (NAVSUP) manages Navy WCF inventory for the Navy Supply Management Activity Group. NAVSUP reported wholesale serviceable condition inventory of approximately \$9.9 billion (at latest acquisition cost [LAC]) for the period ending March 31, 2001.

The Navy WCF uses “standard price” to record inventory items in its logistical and accounting records for day-to-day operations. The “standard price” for an item includes the cost incurred to acquire the material and a cost recovery rate (CRR), or surcharge, to recoup operating and inventory costs in managing the Supply Management Activity Group. For financial reporting purposes, the Navy WCF has adopted the LAC inventory valuation method (see Appendix B for details). The LAC method provides that the last invoice price be applied to all like units including those units acquired through donation or non-monetary exchange. LAC must be adjusted to approximate historic cost by recognizing unrealized holding gains and losses in the ending inventory value.

NAVSUP, located in Mechanicsburg, Pennsylvania, manages Navy WCF inventories through the Naval Inventory Control Point (NAVICP). NAVICP annually computes standard prices for Navy consumable and repairable shipboard and aviation-related inventory items at its sites in Mechanicsburg (NAVICP-M) and Philadelphia (NAVICP-P), Pennsylvania. Each month, NAVSUP uses a spreadsheet model to revalue Navy WCF inventory from standard price to LAC and records journal entries in the Defense Finance and Accounting Service Cleveland Center’s (DFAS-CL) Central Database system. DFAS-CL consolidates the inventory data in the Central Database system and prepares both monthly reports and annual financial statements. As part of this process, DFAS-CL uses a DoD Cost of Goods Sold model to adjust the inventory value at LAC to approximate historic cost. At fiscal year-end, the NAVSUP-revalued inventories are also used to prepare the DoD Supply System Inventory Report (SSIR).

## Objective

The objective of the audit was to evaluate whether cost data used to value DoD inventory are accurate and reliable. This part of the audit focused on the NAVSUP process to revalue inventory from standard price to LAC. We also evaluated applicable management controls. See Appendix A for a discussion of the scope and methodology, the management control program, and prior audit coverage.

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## Inventory Revaluation

NAVSUP materially misstated inventory when revaluing it from standard price to LAC. The revaluation methodology was incorrect because NAVSUP removed a CRR from standard-priced inventory that differed materially from the CRR that NAVICP added during initial item pricing. We estimate that wholesale serviceable condition inventory was misstated by approximately \$497 million for the period ending March 31, 2001. Additionally, NAVSUP provided data showing that wholesale inventories were misstated by approximately \$668 million for the period ending September 30, 2001. NAVSUP has used the same revaluation process for FY 2002 financial reporting. Until the revaluation methodology is corrected, the inventory values computed by NAVSUP cannot be relied upon for Navy WCF end-of-period reporting.

## Inventory Valuation Policy

**Inventory Valuation Assertion.** Underlying the financial statements are management assertions on the valuation, ownership, existence, completeness, and presentation of inventories. Assertions regarding inventory valuation are based on whether inventories have been included in the financial statements at the appropriate dollar amounts and whether the basis of valuation is appropriate, properly applied, and consistent with previous periods.

**Generally Accepted Accounting Principles on Inventory Valuation.** The Federal Accounting Standards Advisory Board's Statement of Federal Financial Accounting Standards No. 3, "Accounting for Inventory and Related Property," October 27, 1993, provides the generally accepted accounting principles on inventory valuation for Federal Government agencies. The policy requires that inventories be valued on the financial statements at historic cost or at LAC adjusted to estimate historic cost. Cost shall include all appropriate purchase, transportation, and production costs incurred to bring items to their current condition and location. The LAC method provides that the last invoice price, that is, the specific item's actual cost used in setting the current year stabilized standard (sales) price, be applied to all like units including those units acquired through donation or non-monetary exchange. LAC must be adjusted to approximate historic cost. The approximation is accomplished by establishing "allowance accounts" to capture unrealized gains and losses from changes to the inventory value occurring throughout the year and using the allowance accounts at least annually to revalue ending inventories and cost of goods sold.

**DoD Inventory Valuation Policy.** The DoD policy for inventory valuation is established in DoD Regulation 7000.14-R, the "DoD Financial Management Regulation," volume 11B, "Reimbursable Operations, Policy, and Procedures – Working Capital Funds," December 1994. DoD policy requires inventories to be reported on the financial statements at LAC in accordance with generally



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accepted accounting principles. The DoD policy also provides instructions for adjusting LAC to approximate historic cost.

The Office of the Under Secretary of Defense (Comptroller) issued a Policy Letter, “Approved Valuation Method for Inventory Held for Sale and Operating Materials and Supplies,” July 6, 2001, requiring use of the “moving average cost method” of valuing inventory for all DoD Components. The moving average cost method is an acceptable historic cost inventory valuation method described in generally accepted accounting principles. However, the policy letter acknowledges that DoD legacy systems were not designed to maintain historic cost valuation for inventory held for sale. Therefore, DoD Components can continue to apply the existing LAC inventory valuation method until their systems are modified or replaced to account for inventory at historic cost.

**DoD Inventory Pricing Policy.** DoD Regulation 7000.14-R, volume 2A, “Budget Formulation and Presentation,” June 2000, requires inventory items to be “price stabilized” which means that all items are priced once and that price remains constant throughout the fiscal year. This stabilized price is known as the standard price, which is composed of LAC plus a CRR.

## Navy Inventory Valuation Process

The NAVSUP inventory revaluation process resulted in an estimated LAC that was used to value inventories at the end of each reporting period. However, generally accepted accounting principles require that inventory be valued using the actual last invoice price, that is, the specific item’s actual cost used in setting the current year stabilized standard (sales) price. The estimated LAC computed by NAVSUP differed materially from the actual LAC NAVICP incurred to acquire the items in the sample of items we randomly selected.

**NAVICP Standard Price Calculation.** The Navy WCF values inventory at standard price in its logistical and financial systems for day-to-day operations. The standard price of an item should represent LAC plus the applicable CRR. NAVICP calculated the FY 2001 Navy WCF standard prices during its annual price update process, which took place between May and June of FY 2000. The standard prices became effective on October 1, 2001 and remained constant throughout the fiscal year as required by DoD stabilized pricing policy. NAVICP-P computed standard prices for aviation-related consumable and repairable items. NAVICP-M computed standard prices for shipboard-related consumable and repairable items.

The NAVICP pricing system was designed to capture the most recent cost to procure an item, or LAC. During the annual pricing update process, the LAC was extracted for each item and combined with the upcoming year’s CRR to arrive at the standard price for the upcoming fiscal year. A separate CRR was established by NAVSUP at the Navy Budget Project level. Budget Projects are two-position numerical codes that identify specific categories of Navy consumable and repairable stock account material held for sale at Navy stock points or contractor

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facilities. Consumable items are items of supply (except explosive ordinance and major end items of equipment) that are normally expended or used up beyond recovery in the use for which they were designed or intended. Repairable items are items of supply subject to economic repair and for which repair (at either depot or field level) is considered in satisfying requirements. The Navy Budget Projects included in our review are listed in Table 1.

**Table 1. Navy Budget Projects Reviewed**

<u>Budget Project</u>	<u>Description</u>	<u>Manager</u>
14	Shipboard Consumables	NAVICP-M
34	Aviation Consumables	NAVICP-P
81	Shipboard Repairables	NAVICP-M
85	Aviation Repairables	NAVICP-P

For purposes of the FY 2001 annual price update, NAVSUP provided NAVICP with a separate CRR, expressed as percentages, for each Navy Budget Project (See “NAVSUP Rates” in Table 2). NAVSUP also provided NAVICP with separate “price change targets” for each Budget Project. The price change target was a percentage by which the current year’s standard-priced inventory value (annual demand times standard price) must change from the prior year. NAVICP focused on the price change target during its annual price update. Additionally, NAVICP used a “variable pricing” methodology during its standard pricing process. Variable pricing required the establishment of pricing tiers within each Budget Project and resulted in the use of a multi-stage process when applying the CRR. Therefore, NAVICP changed the CRR provided by NAVSUP to meet the price change target. NAVSUP did not use the NAVICP-adjusted CRR in the end of period revaluation process (See Appendix B for additional details on the NAVICP pricing process).

**NAVSUP Inventory Revaluation Process.** At the end of each financial reporting period, NAVSUP processed journal vouchers in the Central Database system to revalue the standard-priced inventory that NAVICP calculated to an estimated LAC. This revaluation process is performed at the Budget Project level through the use of a spreadsheet model. Specifically, the standard-priced inventory values for each Budget Project are revalued to an estimated LAC by the removal of the original CRR that NAVSUP calculated for the Presidential budget submission and provided to the NAVICP for use in the annual price update. However, NAVSUP did not establish procedures to account for the changes that NAVICP made to the CRR. Therefore, the NAVSUP revaluation process conflicted with generally accepted accounting principles, which require that the actual last invoice price, that is, the specific item’s actual cost used in setting the current year stabilized standard (sales) price, be applied to all like units. NAVSUP continued to use their revaluation methodology for FY 2002 end-of-period financial reporting (See Appendix B for additional details on the NAVSUP revaluation process).

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## Cost Recovery Rate Variances

The CRR that NAVSUP used to revalue inventory from standard price to LAC did not reflect the CRR that NAVICP used to price the inventory. The CRR used by NAVSUP was the CRR presented in the President's budget. While the NAVSUP CRR was consistent with budgetary figures, it did not remain consistent with the NAVICP CRR used in computing the standard price during the annual price update. This occurred because NAVICP adjusted the CRR originally provided by NAVSUP in order to meet the price change target. However, NAVSUP did not use the adjusted CRR in their end of period revaluation process. Because the CRR used by NAVSUP was not the same as that used by NAVICP to calculate standard price, it is impossible for NAVSUP to revalue the inventory back to its actual LAC.

As part of our evaluation of the internal controls over the valuation of Navy WCF inventory, we reviewed the financially reported LAC for 90 NAVICP-managed items. The 90 items consisted of individual national stock numbers randomly sampled at two NAVICP sites (NAVICP-M and NAVICP-P). The sample results showed that there was a material difference between the actual LAC that NAVICP used to price the item and the revalued or "estimated" LAC that NAVSUP calculated using its spreadsheet model. Table 2 illustrates the variance between the CRR removed by NAVSUP and the CRR that NAVICP had added. The variance ranged from a positive 9.93 percent to a negative 21.87 percent.

**Table 2. Variance in FY 2001 NAVICP and NAVSUP CRR**

<u>Budget Project</u>	<u>No. Items</u>	<u>NAVICP CRR<sup>1</sup></u>	<u>NAVSUP CRR</u>	<u>Variance<sup>2</sup></u>
14	19	58.23	48.30	9.93
34	19	38.28	48.10	(9.82)
81	26	58.63	80.50	(21.87)
85	26	44.44	59.50	(15.06)

The following examples show the impact of the CRR variances on individual items.

One sample item we reviewed was a signal data converter (national stock number 5895-01-352-4749) that NAVICP-P managed. In order to compute the standard

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<sup>1</sup> The NAVICP CRR represents the average difference between the NAVICP standard price and the base replacement price, or LAC, for all audit sample items within a given budget project.

<sup>2</sup> This variance represents the overall difference between the CRR removed by NAVSUP and the average CRR added by NAVICP for all sample items reviewed. We calculated a separate variance based on the extended inventory dollar value for each sample item in order to statistically evaluate the results.

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or sales price of \$50,060, NAVICP-P applied a CRR of 16.42 percent<sup>3</sup> to a LAC of \$43,000. However, when NAVSUP attempted to revalue the item back to LAC, it removed a CRR of 59.50 percent from the standard price. This resulted in an estimated LAC of \$31,386, which understated the actual LAC by \$11,614 (27.01 percent).

Another sample item we reviewed was a desuperheater assembly (national stock number 4410-00-841-7006) that NAVICP-M managed. In order to compute the standard or sales price of \$154,801, NAVICP-M applied a CRR of 58.58 percent<sup>4</sup> to a LAC of \$97,620. However, when NAVSUP attempted to revalue the item to LAC, it removed a CRR of 80.50 percent from the standard price. This resulted in an estimated LAC of \$85,762, which understated the actual LAC by \$11,858 (12.15 percent).

## Impact on End of Period Reporting

As a result of the NAVICP and NAVSUP CRR variances, we estimate that Navy WCF wholesale serviceable condition inventory was misstated by an estimated \$497 million for the period ending March 31, 2001 (See Appendix A for details on the statistical sampling results). The \$497 million misstatement represented approximately 5 percent of the \$9.9 billion total serviceable condition inventory value.

Additionally, NAVSUP provided revised CRR data showing that total<sup>5</sup> wholesale inventories were misstated by approximately \$668 million for the period ending September 30, 2001. We briefed our audit results to NAVSUP officials in July 2002. Subsequent to our briefing, NAVSUP officials provided a revised CRR that they believed more accurately reflected the CRR that NAVICP added to the LAC inventories during the FY 2001 standard price development. NAVSUP officials indicated that they could further refine the CRR by developing a multi-stage revaluation process similar to the process that NAVICP used to develop the standard prices. The revised CRR provided by NAVSUP still differed materially from the CRR that NAVICP added to our random sample items during the standard price development. Table 3 illustrates the variance between the

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<sup>3</sup> The 16.42% CRR was a calculated composite rate, which is the difference between the NAVICP-calculated standard price and the base replacement price, or LAC. NAVICP used a multi-stage process to develop the standard price as described in Appendix B.

<sup>4</sup> The 58.58% CRR was a calculated composite rate, which is the difference between the NAVICP-calculated standard price and the base replacement price, or LAC. NAVICP used a multi-stage process to develop the standard price as described in Appendix B.

<sup>5</sup> Total wholesale inventories include both serviceable (ready for issue) and unserviceable (not ready for issue) items. Our statistical estimates only applied to the value of serviceable items because our sample population excluded unserviceable items. However, NAVSUP uses the same methodology to revalue serviceable and unserviceable items from standard price to LAC.

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NAVSUP-revised CRR and the CRR that NAVICP added to our random sample items during the standard price development.

**Table 3. Variance in FY 2001 NAVICP and NAVSUP-Revised CRR**

<u>Budget Project</u>	<u>No. Items</u>	<u>NAVICP CRR</u>	<u>NAVSUP CRR</u>	<u>Variance</u>
14	19	58.23	43.90	14.33
34	19	38.28	48.30	(10.02)
81	26	58.63	74.60	(15.97)
85	26	44.44	54.40	(9.96)

NAVSUP officials re-performed their inventory revaluation process for the period ending September 30, 2001 using the revised CRR. The results showed that total wholesale inventories were misstated by approximately \$668 million. We believe that the actual misstatement is significantly greater than \$668 million because the NAVSUP-revised CRR still varied materially from the actual rates NAVICP used during the standard price development.

NAVSUP also uses its revaluation process to calculate the LAC inventory value provided annually to the office of the Under Secretary of Defense for Acquisition and Technology for input to the DoD SSIR. The DoD SSIR is an annual publication that provides summary statistics on the status of DoD supply system inventories. The report summarizes, by dollar value, inventories categorized by DoD Component. Inventories are presented on the DoD SSIR at LAC. Therefore, deficiencies in the NAVSUP revaluation process also impact the accuracy of the LAC inventory value presented on the SSIR.

## Conclusion

NAVSUP needs to value inventory at its actual LAC as required by generally accepted accounting principles. Ideally, this should be accomplished by using the specific actual item costs that served as a basis for setting the current year stabilized standard (sales) prices to arrive at the extended inventory value for end-of-period financial reporting purposes. Until the Navy automated systems can be modified to report the LAC inventory value on a transaction basis, a program could be developed that calculates the LAC inventory value on an aggregate basis at the Budget Project level. Data fields are resident in the Navy automated systems containing the LAC for each individual item. Specifically, a replacement price field is available containing the last cost Navy incurred to procure each item. A program could be developed that calculates the LAC inventory value by using the on-hand quantity and the replacement price for each item. The LAC inventory values could be compared to the standard price inventory values to develop the CRR for the NAVSUP revaluation process. Another method would involve correcting the differences between the percentages NAVSUP used to revalue

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inventory and the percentages NAVICP used to calculate standard price. NAVSUP could correct the revaluation errors by modifying the NAVICP pricing system to calculate an average CRR for each Budget Project. This CRR could be calculated for each item based on the difference between standard price and LAC. This average CRR would more likely represent the actual percentages that NAVICP added to each item and could be used by NAVSUP for the end-of-period revaluation process. Navy management is responsible for ensuring that whatever method is used results in a calculated LAC inventory value that does not differ materially from the actual LAC inventory value.

We recognize that the Under Secretary of Defense (Comptroller) has issued policy stating that the DoD will transition to the moving average cost inventory valuation methodology. However, until the Navy fully implements the moving average cost method, the dollar value for aviation and shipboard inventory cannot be relied on unless the deficiencies noted in this report are corrected.

## Recommendations and Management Comments

**We recommend that the Commander, Naval Supply Systems Command, value inventories at their latest acquisition cost for end-of-period reporting purposes. This should be accomplished by:**

- **using the specific actual item costs that served as a basis for setting the current year stabilized standard (sales) prices, or**
- **modifying the end-of-period revaluation process to ensure that the cost recovery rates used by the Naval Supply Systems Command to revalue inventory from standard price to latest acquisition cost are consistent with the cost recovery rates added by the Naval Inventory Control Point during initial item pricing.**

**Management Comments.** The Director of Financial Operations, Assistant Secretary of the Navy (Financial Management and Comptroller) concurred. The Director stated that Naval Supply Systems Command would seek Assistant Secretary of the Navy (Financial Management & Comptroller) and Defense Finance and Accounting Service approval to use actual Cost Recovery Rates for revaluing inventory for financial statement and Supply System Inventory Report purposes. This action will produce a more accurate revaluation of inventory until Naval Supply Systems Command can implement Moving Average Cost at the individual item level. See further comments on the Management Control Program in Appendix A.

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## Appendix A. Scope and Methodology

We performed this audit as part of the requirements of Public Law 101-576, the “Chief Financial Officers Act of 1990,” November 15, 1990, as amended by Public Law 103-356, the “Federal Financial Management Act of 1994,” October 13, 1994. For this part of the audit, we limited the scope of our review to verifying the NAVSUP process for revaluing inventory from standard price to LAC for end of period financial reporting.

We performed the audit at NAVSUP, NAVICP-M, and NAVICP-P. We analyzed the financially reported inventory values for random samples of 45 items each at NAVICP-M and NAVICP-P. We determined whether the NAVSUP-revalued LAC accurately reflected the actual LAC incurred to acquire the inventory. As part of our audit, we reviewed the following inventory-related documents.

- generally accepted accounting principles, DoD financial management regulations, and Navy procedures and policies on pricing, valuing and reporting inventories
- pricing data for each applicable item from the Standard Pricing Application of the Navy Uniform Inventory Control Program System
- Navy Supply Information Systems Activity (formerly the Navy Fleet Material Support Office) documents describing the Standard Pricing Application

We performed this audit from April 2001 through August 2002 in accordance with generally accepted government auditing standards.

Our audit work was limited to determining whether the process that NAVSUP used to revalue inventory from standard price to LAC complied with generally accepted accounting principles. We did not assess the reasonableness of the NAVSUP CRR rates or the NAVICP Central Secondary Item Stratification (CSIS) process. Additionally, the Navy Supply Management Activity Group includes Supply Management (Navy) and Supply Management Marine Corps. This audit did not include a review of the Marine Corps portion of the reported inventory.

We reviewed generally accepted accounting principles, DoD and Navy policies and procedures for valuing inventories. We also interviewed various NAVSUP and NAVICP personnel involved in the inventory valuation process. We gained a detailed understanding of the NAVICP process for developing standard prices. Additionally, we gained a detailed understanding of the NAVSUP process for revaluing standard-priced inventories to an estimated LAC for end-of-period reporting purposes.

We performed a review of the LAC used as a basis for the standard price for 90 NAVICP-managed items. We analyzed the NAVSUP revaluation spreadsheets to gain an understanding of the methodology used to revalue the

inventory items to LAC. For each of the 90 items, we obtained the replacement price that NAVICP used as a basis for the standard price calculation during the FY 2001 annual price update. The replacement price used for the annual price update represents the NAVICP LAC. We obtained the CRR that NAVSUP calculated and used in the inventory revaluation process for FY 2001 financial reporting. We also obtained the CRR that NAVICP used to compute the standard price for the items. We compared the LAC that NAVSUP calculated during its revaluation process to the actual LAC used by NAVICP in the standard price calculation to determine if there was a material difference. We provided our random sample results to the Quantitative Methods Division of the Office of the Assistant Inspector General for Auditing for review and analysis. The Quantitative Methods Division provided assistance in determining the impact of the valuation deficiencies on the sample universe.

The universe consisted of 183,381 inventory records containing serviceable on-hand assets in the NAVICP CSIS as of March 31, 2001. Records were combined into two locations, NAVICP-P and NAVICP-M. We randomly selected 45 aviation-related inventory items managed by NAVICP-P and 45 shipboard-related inventory items managed by NAVICP-M. We selected the minimum sample size of 45 items at each NAVICP in accordance with General Accounting Office Financial Audit Manual guidance. With a minimum sample size of 45 items at each NAVICP, the acceptable number of deviations (errors) was zero. Although NAVICP-M and NAVICP-P used the same financial management system, we treated them as separate entities due to the lack of prior audit work in the area of inventory valuation.

#### Sampling Design

<u>Stratum</u>	<u>Sample Size</u>	<u>Population Size</u>
BP 14	19	60,094
BP 81	<u>26</u>	<u>64,127</u>
NAVICP-M	45	124,221
BP 34	19	23,276
BP 85	<u>26</u>	<u>35,884</u>
NAVICP-P	45	59,160
Total Sample	90	183,381

**Sample Results.** The results of our random samples were used to derive statistical estimates of dollar value misstatement of the \$9.9 billion NAVSUP serviceable condition inventory for the period ending March 31, 2001. We are 95 percent confident the total misstatement is between \$165,623,399 and \$828,005,013.



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95 Percent Confidence Interval

<u>Lower Bound</u>	<u>Point Estimate</u>	<u>Upper Bound</u>
\$165,623,399	\$496,814,206	\$828,005,013

**Use of Computer-Processed Data.** To achieve the audit objective, we relied on computer-processed data from the Navy Uniform Inventory Control Program system. We did not test the general and application controls of the Navy Uniform Inventory Control Program system. We concluded that the data was sufficiently reliable to meet the audit objective, which was to evaluate the NAVSUP process of revaluing inventory from standard price to LAC.

**Use of Technical Assistance.** The Inspector General, DoD, Quantitative Methods Division provided assistance on evaluating the random sample results.

**General Accounting Office High-Risk Area.** The General Accounting Office has identified several high-risk areas in the DoD. This report provides coverage of the Financial Management and Defense Inventory Management high-risk areas.

## Management Control Program Review

DoD Directive 5010.38, "Management Control (MC) Program," August 26, 1996, and DoD Instruction 5010.40, "Management Control (MC) Program Procedures," August 28, 1996, require DoD organizations to implement a comprehensive system of management controls that provides reasonable assurance that programs are operated as intended and to evaluate the adequacy of the controls.

**Scope of the Review of the Management Control Program.** We reviewed the FY 2000 and FY 2001 Annual Statement of Assurance issued by NAVSUP to determine whether the issues addressed in this report had been reported as material management control weaknesses.

**Adequacy of Management Controls.** We identified a material management control weakness, as defined by DoD Instruction 5010.40, related to the valuation of Navy inventory. The details of the management control weaknesses are provided in detail in the Finding section of this report. The recommendation in this report, if implemented, will improve the accuracy and reliability of Navy WCF inventory valuation. A copy of the report will be provided to the senior NAVSUP official responsible for management controls.

**Adequacy of Management's Self-Evaluation.** The FY 2000 and FY 2001 NAVSUP Annual Statement of Assurance did not identify any material control weakness related to the valuation of Navy WCF inventory. Management did not identify inventory valuation as an assessable unit.

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## Management Comments on the Management Control Program and Audit Response

**Management Comments.** The Director of Financial Operations, Assistant Secretary of the Navy (Financial Management and Comptroller), non-concurred with our conclusion regarding the adequacy of management's self-evaluation. The Director stated that the objective of an assessable unit is to provide reasonable assurance that resources allocated to the activity are adequately safeguarded against waste, fraud or mismanagement. The Director further stated that the method of valuing Navy Working Capital Fund inventory is a result of policy and not a material weakness, and therefore should not be included as an assessable unit.

**Audit Response.** Management Control weaknesses should be reported if they are deemed material. The deficiencies in the Naval Supply Systems Command inventory valuation process identified in this report materially affect the accuracy of the inventory amounts presented on end-of-period financial and logistical reports. Inventory valuation affects two Management Control reporting categories, Supply Operations and Comptroller and/or Resource Management. Department of Defense Instruction 5010.40, "Management Control (MC) Program Procedures," August 28, 1996, defines Management Control as a system of guidance, instructions, regulations, procedures, rules or other organization instructions intended to determine the methods to be employed to carry out mission or operational actions or objectives, and ensure that programs achieve intended results. The instruction defines an assessable unit as any organizational, functional, programmatic, or other applicable subdivision, capable of being evaluated by Management Control assessment procedure. Each Department of Defense Component is required to identify, report, and correct material Management Control weaknesses.

## Prior Coverage

During the last 5 years, the Inspector General of the Department of Defense (IG DoD) has issued two reports related to Navy Inventory Revaluation. Unrestricted IG DoD reports can be accessed at <http://www.dodig.osd.mil/audit/reports>.

## IG DoD

IG DoD Audit Report No. D-2001-022, "Inventory Revaluation for the Navy Working Capital Fund by the Naval Supply Systems Command," December 18, 2000.

IG DoD Audit Report No. D-2000-177, "Revaluation of Inventory for the FY 1999 Department of the Navy Working Capital Fund Financial Statements," August 18, 2000.

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## Appendix B. Details on Navy Inventory Pricing and Valuation

**Inventory Pricing.** NAVICP is responsible for establishing the standard prices for all Navy-managed aviation and shipboard-related consumable and reparable inventory items. These items are standard-priced during the annual price update process in accordance with NAVSUP guidance and DoD price stabilization policy. The annual price update occurs May through June of each fiscal year. NAVSUP develops the CRR by Budget Project during the open pricing year, which begins two fiscal years prior to the annual price update process. NAVSUP provides the CRR to NAVICP for development of the standard prices.

In FY 2000 NAVICP began variable pricing, which involves discretely pricing items based on actual cost allocations. NAVICP uses a multi-stage process to calculate standard prices under its variable pricing methodology. Items are initially categorized by Budget Project, each having three price tiers. Each price tier has a separate burdening and CRR.

NAVICP calculates standard prices to recover the costs incurred to support a weapons system. Some costs are directly attributable to a specific item of supply. However, recovery of costs that cannot be attributed to a specific item is calculated by describing the cost that must be recovered as a percentage of a community of items' value of annual demand. This process is referred to as "burdening," which is basically the application of a factor to an item's base cost, in order to better describe the costs NAVICP will incur for the item and similar items in the same community. The CRR elements include categories of cost recovery required to support the wholesale supply system and other factors for budgetary purposes.

At the start of the NAVICP annual pricing update, the standard pricing application extracts obligation history data from its price analysis file in preparation for the pricing process. In May of each year, NAVSUP provides the price change targets, initial cost recovery and burdening rates at the Budget Project level to NAVICP. The initial pricing of the items is performed by the standard pricing application. Once a base replacement price, or LAC, is selected, the system then calculates the standard price. The standard price is calculated using the following formula:

$$\text{LAC} \times (1 + \text{Unique Burdening Rate}^*) = \text{Cost of Material}$$

$$\text{Cost of Materials} \times (1 + \text{Burdening Rate}) = \text{Cost of Goods}$$

$$\text{Cost of Goods} \times (1 + \text{CRR}) = \text{Standard Price}$$

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\* Unique burdening rates allow NAVICP to recover costs for a limited number of specified items that require additional testing, identified by their Special Material Identification Code.

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Upon completion of the initial pricing, NAVICP pricing analysts review the accuracy of the newly computed standard prices to ensure that they were calculated using the most recent obligations. NAVICP pricing analysts focus on items with the highest value of annual demand, and those with the greatest change in value of annual demand from the prior year.

After reviewing the standard prices, NAVICP reruns the pricing program to determine if they achieved their target price change based on the value of annual demand. The price change target represents a change in the standard price from the prior year measured as a percentage. For example, Budget Project 14 items will have a price 19.2 percent higher in FY 2001 than they did in FY 2000 (see Table below for FY 2001 Price Change Targets). To determine if the price change target is met, NAVICP uses the “value of annual demand” calculation process. This process calculates the value of annual demand for the entire priced inventory universe at the current and new standard price. The CRR is then adjusted by NAVICP until the target price change is met.

<b>FY 2001 Price Change Targets</b>	
<u>Budget Project</u>	<u>Price Change Target (Percent)</u>
14	19.2
34	18.5
81	18.8
85	14.3

During the annual price update, NAVICP performs several reviews of the accuracy of standard price changes. Additionally, NAVSUP performs an on-site review of selective items with a high value of annual demand to ensure that they were accurately priced. Upon completion of the annual price update, the new standard prices are sent to the Defense Logistics Information Service in mid-July. The new standard prices become effective on October first of the new fiscal year.

**End of Period Inventory Valuation.** Navy-managed consumable and repairable aviation and shipboard inventory values are maintained in the DFAS-CL Central Database at the NAVICP-calculated standard price. Therefore, NAVSUP must revalue inventory from standard price to LAC to comply with generally accepted accounting principles. For financial reporting purposes, NAVSUP uses a spreadsheet model to accomplish the revaluation for input to both the Navy WCF Financial Statements and the DoD SSIR.

The NAVSUP revaluation spreadsheet model uses financial data pulled from the DFAS-CL Central Database and logistical data from the Navy CSIS file to revalue inventory from standard price to LAC for each individual Budget Project. The CSIS process uniformly calculates inventory requirements and associated asset status for individual secondary items and generates summaries of essential information to provide the foundation for developing secondary item procurement and repair budgets and the DoD SSIR. The CSIS is performed as of March 31 and September 30 each year. The March 31 CSIS results are used to revalue

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inventory at the end of each month from June through November (including the September month-ending inventory used in preparation of the annual financial statements). The September 30 CSIS results are used to revalue inventory at the end of each month from December through May. There is approximately a three-month delay in the finalization of the CSIS results because the process is complex and time consuming (i.e. the March 31 results are not available for use until June). The NAVSUP spreadsheet model stratifies inventory values as Approved Force Acquisition Objective, War Reserves, Economic Retention Stock, Contingency Retention Stock, Potential Excess Stock, and Disposable Excess. The Navy CSIS attributes percentages of the inventory dollar value to all of the inventory categories.

NAVSUP personnel pull logistical information from the CSIS into their revaluation spreadsheets. These standard-priced values are used to calculate the LAC by removing the CRR that NAVSUP had originally calculated and provided to NAVICP for the specific Budget Projects. The CRR used by NAVSUP to revalue inventory from standard price to a LAC is also the CRR presented in the President's budget. The spreadsheet calculates LAC using the following formula:

$$\text{Standard Price Inventory Value} \div (1 + \text{CRR}) = \text{LAC Inventory Value}$$

To calculate the amount of the surcharge removed, the inventory value at LAC is subtracted from the inventory value at standard price and the difference is the value of the CRR. The end result of the revaluation spreadsheets is the calculation of journal voucher values that are processed into the DFAS-CL Central Database. These journal voucher values decrease the financial inventory value from standard price to LAC. Additional journal vouchers are processed to remove the cost of repair, and to remove the salvage cost of items stratified as potential or disposal excess. NAVSUP also uses the CSIS data and financial inventory data from the Central Database as of September 30 to revalue inventory for input to the DoD SSIR.

## **Appendix C. Report Distribution**

### **Office of the Secretary of Defense**

Under Secretary of Defense (Comptroller)/Chief Financial Officer  
Deputy Chief Financial Officer  
Deputy Comptroller (Program/Budget)

### **Department of the Army**

Auditor General, Department of the Army

### **Department of the Navy**

Assistant Secretary of the Navy (Financial Management and Comptroller)  
Naval Inspector General  
Auditor General, Department of the Navy  
Commander, Naval Supply Systems Command  
Commander, Naval Inventory Control Point

### **Department of the Air Force**

Assistant Secretary of the Air Force (Financial Management and Comptroller)  
Auditor General, Department of the Air Force

### **Non-Defense Federal Organizations and Individuals**

Office of Management and Budget  
General Accounting Office

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## **Congressional Committees and Subcommittees, Chairman and Ranking Minority Member**

Senate Committee on Appropriations  
Senate Subcommittee on Defense, Committee on Appropriations  
Senate Committee on Armed Services  
Senate Committee on Governmental Affairs  
House Committee on Appropriations  
House Subcommittee on Defense, Committee on Appropriations  
House Committee on Armed Services  
House Committee on Government Reform  
House Subcommittee on Government Efficiency, Financial Management, and Intergovernmental Relations, Committee on Government Reform  
House Subcommittee on National Security, Veterans Affairs, and International Relations, Committee on Government Reform  
House Subcommittee on Technology and Procurement Policy, Committee on Government Reform





# Department of the Navy Comments



DEPARTMENT OF THE NAVY  
OFFICE OF THE ASSISTANT SECRETARY  
(FINANCIAL MANAGEMENT AND COMPTROLLER)  
1000 NAVY PENTAGON  
WASHINGTON, D.C. 20350-1000

7540  
FMO

OCT 10 2002

MEMORANDUM FOR INSPECTOR GENERAL, DEPARTMENT OF DEFENSE

Subj: REPORT ON NAVAL SUPPLY SYSTEMS COMMAND REVALUATION OF  
INVENTORY TO LATEST ACQUISITION COST (PROJECT NO.  
D2001FJ-0195.001)

Ref: (a) DODIG memo of 12 Aug 02

Encl: (1) DON Comments on DODIG Draft Audit Report

By reference (a), you requested comments regarding the  
subject draft report. Comments are provided in enclosure (1).  
Point of contact for this matter is Mr. Edward Johnson at  
(202) 685-6703 and by email at johnson.edward@fmo.navy.mil.

A handwritten signature in cursive script, reading "Ronald L. Haas", is positioned above the typed name.

RONALD L. HAAS  
Director  
Office of Financial Operations

Copy to:  
NAVINGEN  
COMNAVSUPSYSCOM  
DFAS-CL

**Department of the Navy Comments**  
**on**  
**DODIG Draft Audit Report of 12 August 2002**  
**"Report on Naval Supply Systems Command Revaluation of Inventory**  
**to Latest Acquisition Cost "**  
**(Project No. D2001FJ-0195.001)**

**Finding: Inventory Valuation**

**Recommendation for Corrective Action**

We recommend that the Commander, Naval Supply Systems Command value inventories at their latest acquisition cost for end-of-period reporting purposes. This should be accomplished by:

- Using the specific actual item costs that served as a basis for setting the current year stabilized standard (sales) prices or
- Modifying the end-of-period revaluation process to ensure that the cost recovery rates used by the Naval Supply Systems Command to revalue inventory from standard price to latest acquisition cost are consistent with the cost recovery rates added by the Naval Inventory Control Point during initial item pricing.

**Department of the Navy Comment**

Concur. The Cost Recovery Rate (CRR) used in initial item pricing (also called the annual price update) to revalue inventory to an estimated Latest Acquisition Cost (LAC) would be more accurate. Defense Finance and Accounting Service (DFAS) guidance for revaluation states that the rate to be used is the President's Budget CRR published in January; this CRR is a budgetary estimate. The actual CRR used to set prices is not determined until the annual price update, which occurs the following June.

The Naval Supply Systems Command (NAVSUP) will seek Assistant Secretary of the Navy (Financial Management and Comptroller) (ASN(FM&C)) and DFAS approval to use actual CRRs for revaluing inventory for financial statement and Supply System Inventory Report purposes. Estimated completion date is 31 January 2003. While this will produce a more accurate revaluation of inventory in an aggregate sense as recommended in the finding, the ultimate solution will be the implementation of Moving Average Cost at the individual inventory item level. NAVSUP is pursuing an Enterprise Resource Planning (ERP) solution to resolve the valuation of inventory issues facing all the Services.

**Appendix A: Management Control Program review.**

Adequacy of Management Self-Evaluation. The FY 2000 and FY 2001 NAVSUP Annual Statement of Assurance did not identify any

Encl (1)

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material control weakness related to the valuation of Navy Working Capital Fund (NWCF) inventory. Management did not identify inventory valuation as an assessable unit.

**Department of the Navy Comment**

Non-concur. The objective of an assessable unit is to provide reasonable assurance that resources allocated to the activity are adequately safeguarded against waste, fraud or mismanagement. We consider the method of NWCF inventory valuation to be the result of a policy issue vice a material weakness and therefore do not believe it should be included as an assessable unit. The problem will be solved upon implementation of ERP where Moving Average Cost will be the method of valuing inventory.

## **Team Members**

The Defense Financial Auditing Service Directorate, Office of the Assistant Inspector General for Auditing of the Department of Defense prepared this report. Personnel of the Office of the Inspector General of the Department of Defense who contributed to the report are listed below.

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